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## Heart Failure

### IMPACT OF STATINS ON LONG TERM MORTALITY IN HEART FAILURE WITH PRESERVED EJECTION FRACTION (HFPEF)

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**Background:** Reduced bioavailability of nitric oxide due to endothelial dysfunction causes generation of reactive oxygen species which leads to vascular stiffness and worsening of HFpEF. Pleiotropic effects of Statins beneficially modulate endothelial function by reducing inflammation, stabilizing atherosclerotic plaque and decreasing oxidative stress. We studied if Statin therapy impacts long term mortality and morbidity in patients with HFpEF.

**Methods:** Retrospective analysis of patients with HFpEF by echocardiography criteria from 1997-2010. Patients were divided into 2 cohorts: cohort 1-on Statins and cohort 2-not on Statins. Studied endpoints were all-cause mortality and readmission for heart failure (HF) at 5 years.

**Results:** Mortality at 1,2,3,4 & 5 year between cohorts 1(n=115) & 2 (n=88) were 9.6% vs 20.5% p=0.01, 18.9% vs 39.1% p=0.001, 30% vs 46% p=0.008, 38.3% vs 50.5% p=0.003 & 51% vs 61% p=0.02 respectively. Log rank test for cumulative mortality showed at 5 year cohort 1 mortality was 51% vs 61% in cohort 2, p<0.001(RR=0.6, 95%CI=[0.4-0.9], NNT=10). There was no difference in mean 5-year readmission rate for HF exacerbation between cohort 1 4.6±4 vs 3.7±3.7 in cohort 2, p=0.1.

**Conclusion:** Patients with HFpEF who were started on a statin had a significant long term mortality benefit compared with patients not on a statin. However, a morbidity benefit was not observed. This response highlights the strong pleiotropic effects of Statins and offers a possible new modality in managing HFpEF.